

# Al services for data contextualization and high data quality



### MORESOPHY and Denodo

Denodo, the industry's leading data management platform, joins hands with the distinguished data analytics and Al solution pioneer, MORESOPHY, to support organizations across industries to achieve better business outcomes through improved data quality and a better understanding of the semantics of data.

# Why MORESOPHY and Denodo?

For automating their processes and striving in data-driven business, organizations spend a significant amount of their time in searching, acquiring and preparing the data they need. Usually, the right data is distributed across different systems, coded in different formats and represented in different schemes. Denodo allows for easy integration of data, regardless of their format or source. As a result, users can quickly prepare aggregated views on data as required for further processing and data analytics. Through its data catalog Denodo provides a centralized information registry for relevant data. This allows users to quickly find and retrieve the data they need for their dedicated purpose. Denodo's platform serves as a one-stop-shop for data in decentralized data teams like proposed in a state-of-the-art data mesh architecture. However, aggregated data in many cases still suffer from being ambiguous, redundant or faulty due to typos or misspellings and thus lack the quality needed to be provided as ready-to-use "data products". This challenge is even more special for terms, phrases and strings in either databases, text in documents or meta-data which need to be interpreted and normalized to naming conventions to be effectively mapped and reduced. Cleaning, normalization and mapping of data in general takes 80% of the time for data-scientists that need to prepare data for machine learning purposes. Also, for providing highly expressive analytics and reporting dashboards, terms and phrases need to be normalized for high expressiveness and easy interpretation. MORESOPHY provides proprietary Al services and applications that complement Denodo platform capabilities in:

- Improve data transparency for every user by establishing a centralized, enterprise-wide repository of assets with full business context, so all users have a common understanding of the data and can easily discover data that is relevant to them.
- Enhance data quality with AI services (enrichment, normalization, deduplication, resolving ambiguities, identification of entities, etc.).
- Optimize speed and quality of data preparation processes for machine learning.
- Achieve goals of advanced analytics and data-driven business based on a holistic understanding of semantics of data.

As a result data engineers profit from automated processes for identifying, interpreting and seamlessly harmonizing data to provide high-quality data. MORESOPHY and Denodo make data more valuable and usable for business users and data engineers.



Organizations spend a significant amount of their time looking for the right data but only a fraction of that time utilizing it as many users struggle to get access to and find the data they need. Often, the users have no common understanding of the data and have no reliable way to figure out what data is relevant to them. One reason for this is the lack of a centralized, enterprise-wide repository of assets that have full business context. Ensuring that business users have a quick and easy way to find the data they need and understand the technical lineage and business context of data is key to improving data transparency, improving the efficiency of users, and becoming a data-driven company. Therefore, to make the consumption of data intuitive, in today's age of big data and self-service analytics, data catalogs have become pivotal for metadata management. Data catalogs are a type of centralized information registry that contains information about all company data, enabling efficient data management, categorization and use within the company. Data catalogs increase performance, efficiency, and data quality, and enable transparent decisionmaking. Denodo's logical data integration platform is complemented by its data catalog capabilities. Combining the data delivery layer with Data Catalog allows a contextualized usage of data assets, helping to generate ergonomic metrics such as relevance and timeliness, who uses what and when what datasets are commonly used together, etc. The Denodo Data Catalog enables a digital marketplace that empowers a community of analysts and decisionmakers to find and use information assets quickly, which is essential in this age of self-service analytics. MORESOPHY offers the clients of Denodo an out-of-the-box sophisticated suite of Al models and knowledge graphs for immediate contextualization, sense-making, and semantic integration of heterogeneous, ambiguously structured data. Thereby bringing meaning and transparency to all data by intelligently understanding ambiguities, recognizing patterns, and automatically adding new assessment perspectives to the data.

# What Denodo Brings

Denodo Platform is an industry-recognized data integration, management, and delivery platform. Data virtualization technology makes the core of the platform, making it technology agnostic, and therefore a highly efficient and effective method for integrating data. Rather than replicating data to a central repository, data virtualization provides a real-time, integrated view of the data across myriad heterogeneous sources, and these include on-premises and cloud repositories, and structured or unstructured sources. This approach enables companies to establish modern architectures such as logical data warehouses, which possess many of the characteristics of traditional data warehouses, yet are also capable of supporting modern data sources, such as cloud repositories.

Companies gain a single view of the truth and a single point from which to manage security and governance protocols while leaving all the source data in its original location. Even when the source data is moved, the data virtualization layer manages such complexities on behalf of the user and any consuming applications, providing real-time access to integrated data, regardless of its location.

The Denodo Platform is the industry's only data integration and management platform that offers all the capabilities necessary to build a logical data fabric. It provides a common semantics layer to expose data more quickly to business, a dynamic data catalog for semantic search and enterprise-wide data governance, industry-leading query acceleration supported by machine learning, automated infrastructure management for multi-cloud and hybrid-cloud scenarios, and embedded data preparation capabilities for self-service analytics, faster time-to-insight, better privacy and compliance, greater automation of data management processes, and avoiding vendor lock-in.

# What MORESOPHY Brings

MORESOPHY offers modular components and unique Al-based services for activating potentials on arbitrarily structured data. MORESOPHY's platform automates the delivery of business-critical, decision-relevant insights to internal and external customers - from distributed sources and on-demand in near real-time. With its proprietary Al, pretrained on universal data from more than 700 domains, MORESOPHY's services transform all internal and external data into usable data, no matter how unstructured and semantically ambiguous the data is. It not only provides a sophisticated suite of Al models and knowledge graphs for immediate contextualization, sense-making, and semantic integration of heterogeneous, ambiguously structured data, but also builds up highly individual solutions to customer needs. For MORESOPHY, the partnership with Denodo is key because the presence and access of data are essential for MORESOPHY's services, so Denodo's data virtualization layer is the underlying foundation for MORESOPHY's services to be implemented enterprise-wide.

### Together, MORESOPHY and Denodo enable the organization to:





Improve data transparency for every user by establishing a centralized, enterprise-wide repository of assets with full business context, so all users have a common understanding of the data and can easily discover data that is relevant to them.



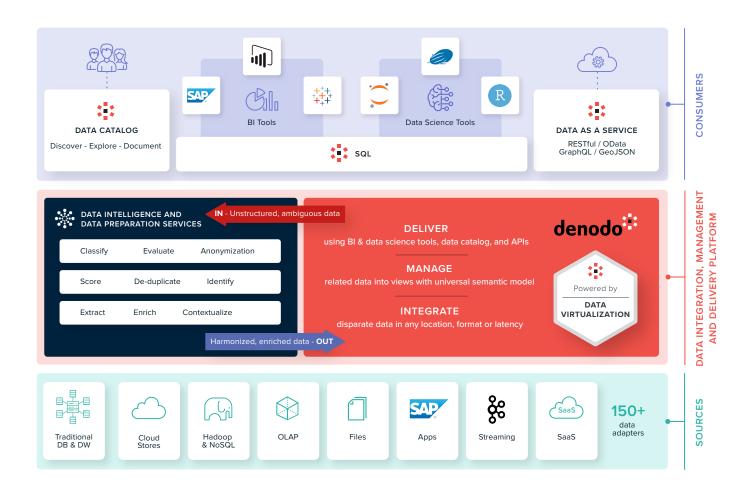
Achieve goals of advanced analytics and data-driven business based on a holistic understanding of semantics data.



Enhance data quality with AI services (enrichment, normalization, deduplication, resolving ambiguities, identification of entities, etc.).



Optimize speed and quality of data preparation processes for machine learning.



**Figure 1:** An architectural blueprint of how MORESOPHY enhances the capabilities of the Denodo Platform by providing NLU based services for data augmentation and contextualization.

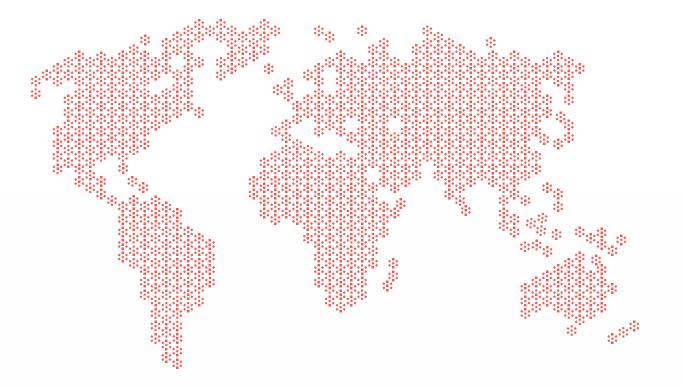








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### **ABOUT MORESOPHY**

MORESOPHY is leading provider of data analytics solutions for the realization of data-driven processes. MORESOPHY technology offers unique Al-powered methods for preparing high-quality, meaningful data for integration into cloud-based data management architectures.

Industry leaders such as PwC, Deutsche Telekom, Accenture, Haufe-Lexware and GVL rely on MORESOPHY's 20+ years of experience in activating undiscovered potential in arbitrarily structured data. Data experts as well as business users, editors as well as business analysts benefit from a deep contextual understanding of their data - for higher productivity, strong customer loyalty and sustainable risk management.

### ABOUT DENODO

Denodo is a leader in data management. The award-winning Denodo Platform is the leading data integration, management, and delivery platform using a logical approach to enable self-service Bl, data science, hybrid/ multicloud data integration, and enterprise data services. Realizing more than 400% ROI and millions of dollars in benefits, Denodo's customers across large enterprises and mid-market companies in 30+ industries have received payback in less than 6 months.



